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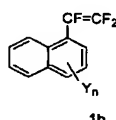
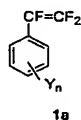
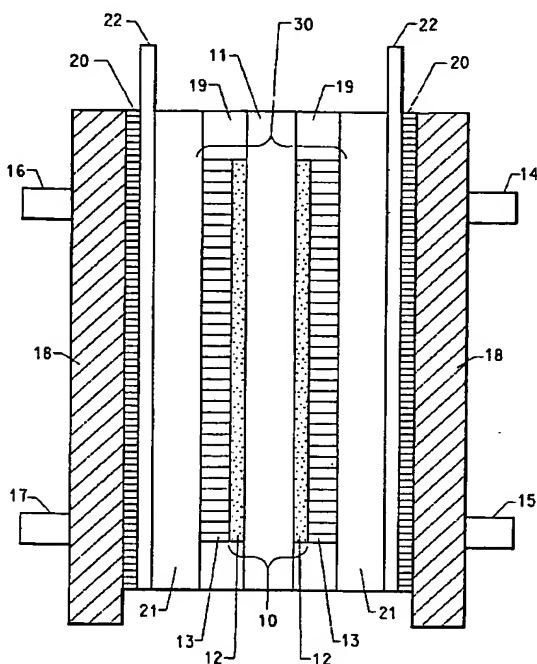
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(54) Title: **TRIFLUOROSTYRENE CONTAINING COMPOUNDS GRAFTED TO BASE POLYMERS, AND THEIR USE AS POLYMER ELECTROLYTE MEMBRANES**



(57) Abstract: A fluorinated ion exchange polymer prepared by grafting a monomer on to a base polymer, wherein the grafting monomer is selected from the group consisting of structure 1a, structure 1b and mixtures thereof, (INSERT 1a and 1b HERE) wherein Y is selected from the group consisting of -R_FSO₂F (sulfonyl fluoride), -R_FSO₃M (fluorosulfonic acid or salt), R_FSO₂NH₂ (fluorosulfonamide), and -R_FSO₂N(M)SO₂R_F (imide); wherein M is H, an alkali cation, or ammonium; and R_F and R_F² groups are perfluorinated or partially fluorinated, and may optionally include ether oxygens; and n is between 1 and 2 for 1a, or n is between 1 and 3 for 1b. These ion exchange polymers are useful in preparing catalyst coated membranes and membrane electrode assemblies used in fuel cells.



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